



Arctic tides from GPS on sea ice

Kildegaard Rose, Stine; Skourup, Henriette; Forsberg, René

Publication date:
2012

Document Version
Publisher's PDF, also known as Version of record

[Link back to DTU Orbit](#)

Citation (APA):
Kildegaard Rose, S., Skourup, H., & Forsberg, R. (2012). *Arctic tides from GPS on sea ice*. Abstract from Earth Observation and Cryosphere Science, Rome, Italy.

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Abstract title

Arctic tides from GPS on sea ice

Abstract text

The presence of sea-ice in the Arctic Ocean plays a significant role in the Arctic climate. Sea ice dampens the ocean tide amplitude with the result that global tidal models which use only astronomical data perform less accurately in the polar regions. This study presents a kinematic processing of Global Positioning System (GPS) buoys placed on sea-ice at five different sites north of Greenland for the study of sea level height and tidal analysis to improve tidal models in the Central Arctic. The GPS measurements are compared with the Arctic tidal model AOTIM-5, which assimilates tide-gauges and altimetry data. Furthermore, we prove that the geodetic reference ellipsoid WGS84, can be interpolated to the tidal defined zero level by applying geophysical corrections to the GPS data.

Topics

13 Cryosphere and ocean dynamics (e.g., thermohaline circulation)

List of authors

Ms, Rose, Stine Kildegaard, DTU Space, DENMARK; Mrs, Skourup, Henriette, DTU Space, DENMARK; Mr, Forsberg, René, DTU Space, DENMARK

Type:

Poster